



Office of the State  
Fire Marshal—  
Prevention Division

## Prevention Highlights

SUMMER 2015

# Prevention Highlights



Summer is here and that can only mean one thing, **HEAT!**

By the time this edition comes out school will be gearing up to get back in session. I know it seems like it just got out, however, we must make sure our school year starts out right by ensuring those buildings are prepared for occupancy once again. Thank you to all those who help maintain our schools, universities and colleges.



What is happening in the Prevention Division at OSFM? We are working to provide you with new and innovative ways to keep you up-to-date on the most current prevention information. You can help us by letting us know what you would like to see more of. Perhaps articles on a particular topic, more photos of violations, training, etc? Let me know what you think! [mende.barnett@ksfm.ks.gov](mailto:mende.barnett@ksfm.ks.gov)

In the upcoming months we will be celebrating Campus Fire Safety Week in September with a Proclamation signing by the Governor and Fire Prevention Week in October with our annual Fire Safety poster contest.

Don't forget about Blaze, the Fire Dog With a Blog at [www.pawsforprevention.org](http://www.pawsforprevention.org).

### Inside This Issue:

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We're on the Web!

[www.firemarshal.ks.gov](http://www.firemarshal.ks.gov)



# PROGRAM MANAGEMENT

*By: Mende Barnett, OSFM Education Consultant*



How many times have you had an idea about something you want to do but thought, “I can never make that happen” or “It will never work”? Well, you are not alone.

Having the idea or thought is the first step to putting the plan in place. The rest is just putting the pieces together.

Easier said than done right?

Oftentimes implementing something new doesn't always work out how we would like and we get resistance from others. However, it doesn't have to be this way.

Implementing a new project or program takes time and not many of us have a whole lot of it. That's why you need to involve others. These “others” are called stakeholders. The stakeholders are the one's who will be affected by this project you are putting together. They are the ones who will have valuable information to contribute to the success of your magnificent idea. So get out your pen and paper and identify all the people you think would be affected by your idea. The more the better because not all of them will want to contribute. Then contact them. Initiate the conversation and share your idea.

Experiment with ideas during your planning process and allow your stakeholders to speak freely. The “crazy” idea may be just what you need to pull this off and knock it out of the park. You may be surprised at all the great input you get.

Depending upon your project, the planning phase can vary in time. Once you have stakeholders on board you can delegate tasks to them and this will ease some of your workload. This is where you can implement a detailed action plan. Giving each stakeholder a task of what you would like them to accomplish can really help pull this together. Just remember when assigning a task you also need to give a deadline of when you would like it completed. You don't want someone holding up the process.

Once the steps are put into place this is where you bring it all together and execute the plan. Don't be afraid if it doesn't go as planned the first time around. That's okay! Rome wasn't built in a day. This is where you focus on what is going right and tweek the parts that aren't. This part is called process improvement. When one part may need some adjusting you don't get out the sledgehammer and start wailing away at the whole thing. You fine tune the parts that need it.

Finally you are able to successfully close the project. By “close” I mean you have it in place and you are able to take a step back and be proud of what you have accomplished. While the end result may need some adjusting from time- to- time you have created something that will hopefully provide assistance to others in some fashion. Also, be sure to take time and measure the outcomes. Pay attention to its effectiveness.

Success doesn't happen over night and it may take a village to complete it but when the appropriate tools are used you can create something wonderful.



## EGRESS WINDOWS

*By: Brian Love, OSFM Fire Protection Specialist*



We don't always think of windows as being lifesaving equipment. However, when you need to escape or be rescued, the right size of window can make a difference between life and death.

These lifesaving means of escape are often called egress windows or escape windows.

In a house fire, the basement stairs could be blocked or there could be thick black smoke rolling down the hallway to a dead-end bedroom and the windows that are large enough for you to escape and for firefighters to enter become your only means of exiting.

How do you know if you have a window that meets code?

You will need to measure your window height and width to determine if your window is considered an egress window.

Minimum clear opening must equal or exceed 5.7 square feet or 821 square inches and the maximum distance of window sill off the floor is 44 inches.

Escape windows shall be operational from the inside without the use of keys or tools and should not have a screen to obstruct use.

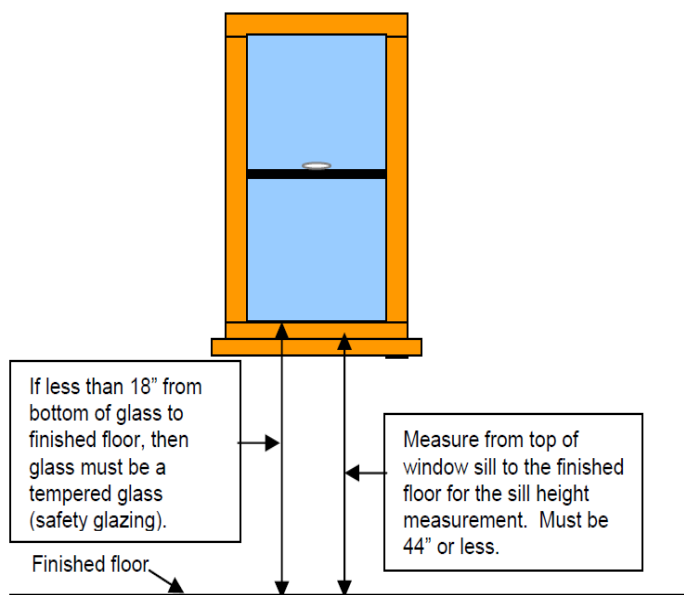
For windows that are below grade or partially below grade the window should lead to a window well that should be a minimum of 9 square feet in an area with a minimum of 36

inches on each side. If the window well is more than 44 inches deep, a stair or ladder is required. The ladder shall be permanently affixed to the side of the window well and extend no more than six inches into the window space.

A covering may be used over the window well as long as the force required to remove the covering is about the same as would be required to open the window.

You want to make it as easy as possible to get out in the event of a fire or emergency.

### How to Measure Sill Heights:





# FIRST LINE OF DEFENSE IS NOT ENOUGH

By: Jason Lady, OSFM Fire Protection Specialist



Over and over again you hear the professionals talk about

how smoke alarms are key to surviving a fire. While they are extremely important and in some cases required they need to be paired with other safety measures for you to be safe.

In residential homes having a smoke alarm will alert you to smoke and fire statistics show that over 30% of homes that have smoke alarms didn't work when a fire occurred. There are a few ways to insure that your smoke alarm will work in the event of a fire. First, test your alarms monthly. Make sure they sound when you press the test button. Keep them free of debris and dust and change the batteries when needed. Second, have them hardwired to your homes electrical system and have battery backup. Remember just because they are hardwired they still need to be replaced when they become obsolete.

Install smoke alarms on every level of your home, in every sleeping room and outside each sleeping area as well.

Having a working smoke alarm is extremely important but in any home

or occupancy once that alarm sounds, do you know what to do?

Knowing and practicing what to do in case a fire should occur is your second defense. When the smoke alarm sounds you should be able to know what to do in an instant. Have an escape plan.

A fire grows twice its size every 20 seconds and if a fire occurs in the middle of the night when you are not fully aware of what is happening chances are you will be moving slow. It will take anywhere from 4 to 7 minutes for the fire department to get to your home or residence and by that time you should be already be outside.

Having a working smoke alarm is certainly important to your survival in a home fire but knowing what to do once that alarm sounds is just as important.

Having two ways out of

your home will help you and your family to get out quickly. If the room is full of smoke you will want to get as slow as possible and get to the nearest exit.

Once you are outside and away from your home at a safe distance do not go back inside. Call 911 and let the fire fighters go in your home. They are equipped with the appropriate gear and tools to go inside your smoke filled home.

Practicing your escape plan, testing your smoke alarms monthly and having home address numbers that are clearly visible from the street will help to provide you with a sense of security from the potentials of fire.

### Steps to SURVIVE

- 1) Have a working smoke alarm
- 2) Test your alarms monthly
- 3) Have an escape plan
- 4) Practice your escape plan
- 5) Visible address numbers
- 6) Get Low and Go
- 7) Get out ALIVE





# COMBUSTIBLE LIQUIDS

By: Jack Chatmon, OSFM Fire Protection Specialist



The Office of the State Fire Marshal is responsible for conducting plan reviews and inspections of aboveground storage tanks

that contain Class I, II and III flammable and combustible liquids. If the flammable or combustible liquid does not have a flash point it is not regulated by our office.

In order for tanks to be regulated by our office they must be used for government, business and industrial purposes and be at least 660 gallons. As well as tanks used for strictly private agricultural purposes and are at least 1100 gallons.

Underground storage tanks containing flammable and combustible liquids are regulated by the Kansas Dept. of Health and Environment (KDHE).

### What is considered a combustible liquid?

A combustible liquid is any liquid that has a closed-cup flash point at or *above* 100 degrees F (37.8 degrees C), as determined by the test procedures and apparatus set forth in NFPA 30, *Flammable and Combustible Liquids Code*. A flammable combustible liquid is any liquid that has a closed-cup flash *below* 100 degrees F (37.8 degrees C), as determined by the test procedures and apparatus set forth in NFPA 30. A flammable liquid must also have a Reid vapor pressure that does not exceed an absolute pressure of 40 psi at 100 degrees F, as determined by ASTM D 323, *Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method)*. Flash point was selected as the basis for classification of flammable

and combustible liquids because it is directly related to a liquid's ability to generate vapor (i.e. its volatility).

### Combustible liquids are divided into two classes:

- Class II – any liquid with a flash point at or above 100 degrees F and below 140 F.
- Class III – any liquid with a flash point at or above 140 degrees F. *Class III(A) liquid – any liquid that has a flash point at or above 140 degrees F but below 200 degrees F. Class III (B) liquid – any liquid with a flash point at or above 200 degrees F.*

### Flammable Liquids are divided into three classes:

- Class IA liquid – any liquid that has a flash point below 73 degrees F and a boiling point below 100 degrees F.
- Class IB liquid – any liquid that has a flash point below 73 degrees F and a boiling point at or above 100 degrees F.
- Class IC liquid – any liquid that has a flash point at or above below 73 degrees F but below 100 degrees F.

The application form, administrative regulations, and checklist for aboveground storage tanks containing flammable and combustible liquids can be found on our website – [www.firemarshal.ks.gov](http://www.firemarshal.ks.gov).

The application must initially be made to the Tank Division of KDHE, who will also issue any permits. While our office does not issue the permits it is our responsibility to review the application to ensure compliance with the applicable fire and life safety standards.

The 2008 edition of NFPA 30 is the code book enforced by our office for plan review and inspection purposes.



# A DIRTY SECRET

*Sara Wood, OSFM NFIRS Program Manager*

Is dirt flammable?

Most would say no but in the case of potting soil it really can be. Potting soil has a preconceived image that it's mostly dirt with some nutrients added in. Potting soils often contain peat moss, coir fiber (coconut fiber), and composted pine bark. All three ingredients are flammable. Potted plants are especially vulnerable to fire when the soil dries out. Add in a plant that has dried out from lack of water and the ignition probability increases quickly.

With dry conditions just waiting for a spark, the last thing that should be added to the mix are cigarettes. Unfortunately, that's exactly what people add. Extinguishing cigarettes into potted plants has caused at least 18 fires in Kansas since 2001, damaging a total of 125 apartment units and 6 houses. The Kansas Fire Incident Reporting System does not contain specific ignition codes for potting soil combined with smoking. The 18 fires were located using a narrative search for "potting soil" and "potted plant" but narratives aren't required. These fires are probably much more prevalent than stated here, due to these reporting holes.



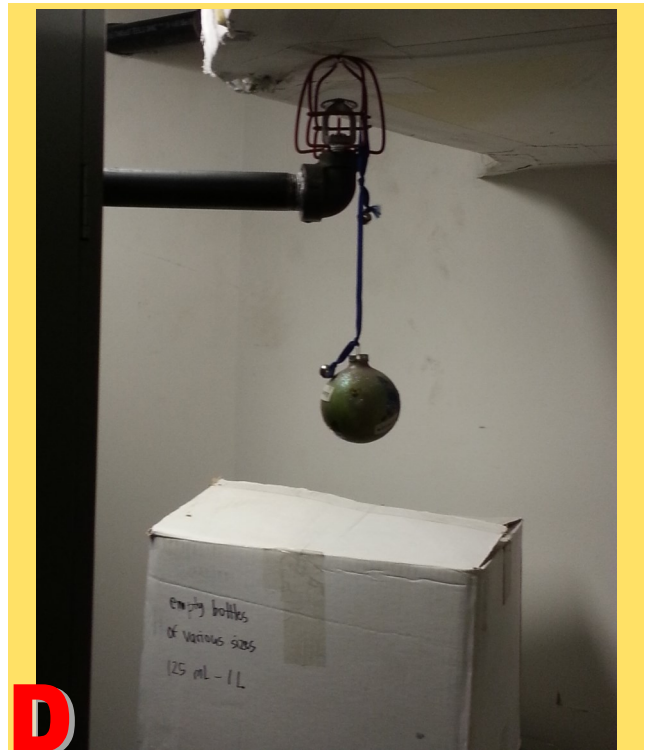
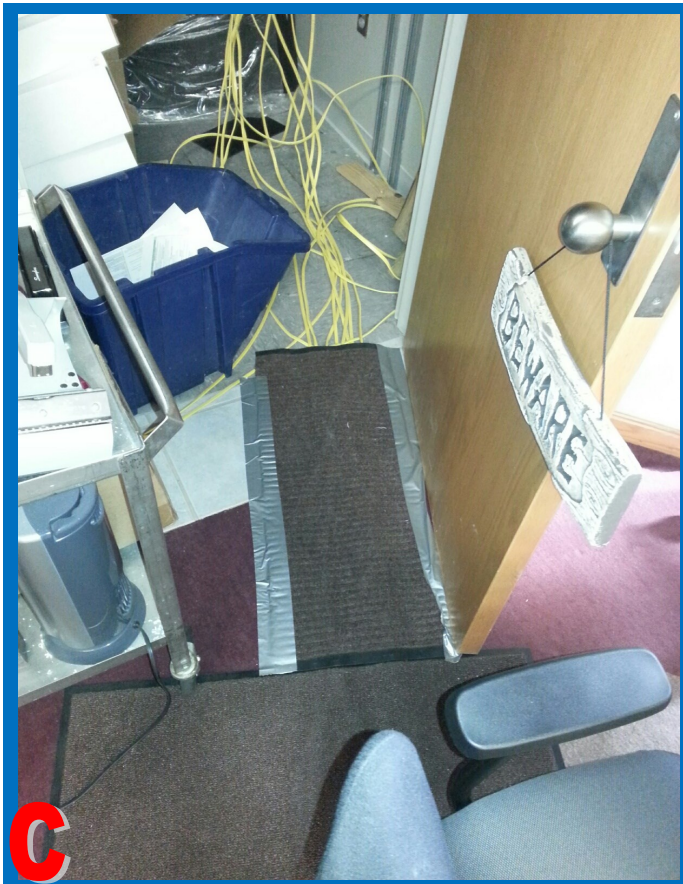
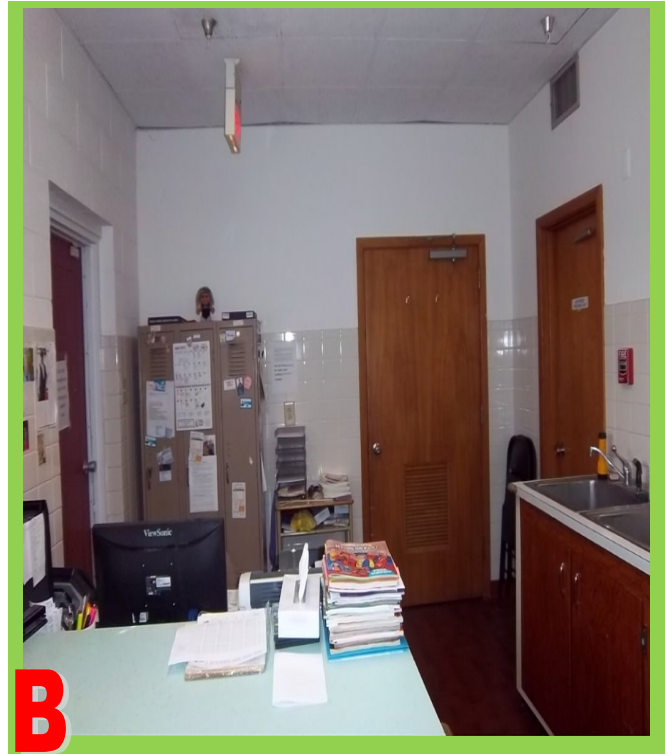
*Thank you Camrose Fire Department in Camrose, AB, Canada for providing photos from a local fire caused by cigarette butts. Photos were not available for the Kansas fires.*





# CAN YOU SPOT THE VIOLATION?

By: Randy DeShon, OSFM Field Supervisor



Answers on last page



# PROPANE NEWS

*By: Mike Wikle, OSFM Enforcement Officer*

The Kansas Legislature approved and put into law the Kansas Propane Safety and Licensing Act in 2004. The statutes and regulations were established to enhance safety for the consumers of propane by ensuring employees are trained and facilities are safely maintained. The Office of the State Fire Marshal was tasked with the enforcement of this act that began in 2006.

Time sure does fly as we are now in the 9<sup>th</sup> year of our propane inspection and licensure program. During this time the propane industry in Kansas has seen a lot of transitions over the years, where some companies were not able to meet the strict training guidelines, or companies consolidated to reduce costs. However, the number of licensed facilities today is fairly equal to the

number of those facilities licensed at the start of the 2006-2007 season. We know that this program has made great strides towards enhanced safety for the State of Kansas. This can be seen by the difference in citations issued from 9 years ago vs today.

In the beginning of the 2006-2007 seasons, many facilities were being cited for fairly big safety issues such as:

- Non inoperable emergency shut-off valve
- Combustible material located within the tank area
- Lack of site security and in some cases the valves were not secured against tampering
- Lack of appropriate gauges

Today in 2015, a majority of the inspection findings are considered very minimal and have to do with routine maintenance items such as:

- Missing or faded container markings
- Missing or faded pipe marking
- Vegetation or tall grass within the tank area
- Maintaining a facility sign

This is not an accomplishment solely of our agency, but a shared one with everyone involved in the propane industry, from members of the Propane Advisory Board, to the retailer and distributors and even consumers.

Everyone has worked hard to make this program what it is today and we at the Office of the State Fire Marshal would like to thank everyone for helping to keep Kansas propane safe and in compliance!

### DID YOU KNOW?

Our office has completed over **4,300** propane inspections

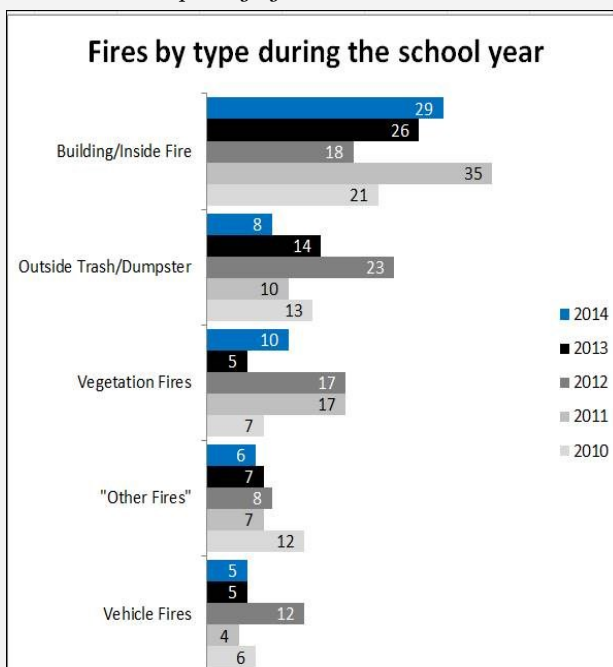




# FIRES IN SCHOOLS

By: Mende Barnett, OSFM Education Consultant

Kansas Fire Incident Reporting System



School buildings are among one of the most populated facilities that we inspect, making them extremely vulnerable to human error.

With the help of participating fire departments, school officials and building staff we are able to provide a safe atmosphere for our Kansas kids.

We continue to see school fires occurring and over the last five years have actually seen an increase - making them even more of a concern.

As we look to the upcoming school year with high hopes that our Kansas schools will be safe, it is important to provide accurate information to all involved.

## Violations

The most cited violation throughout the year was for extension cords and power strip usage. Over **300** of these violations were found in school buildings across the state.

Some examples were extension cords being used for permanent wiring, placed under carpet, frayed and cracked. Power strips were found daisy chained, overloaded and not mounted properly.

## Waivers

During the past school year, 22 waivers were issued for violations. Almost all of those have been corrected as of now.

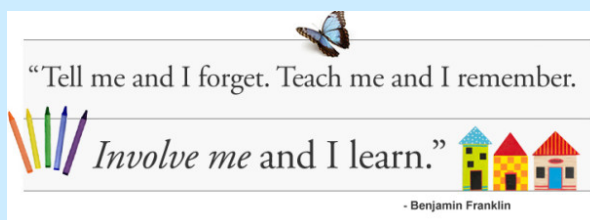
These waivers consisted of hood suppression systems, sprinkler head locations and fusible link dampers. More than half of those violations consisted of fire alarm systems.

## Antiquated Fire Alarm Systems

While inspections were taking place, it was found that 31 schools had antiquated fire alarm systems in their buildings. All of these facilities had waivers issued to them for the replacement or update of their systems.

## Memorandum of Understanding

A memorandum of understanding is made between our office and Local Jurisdictions in first and second class cities for the inspections of schools, preschools, child care centers, assisted livings, residential board and care, hospitals and jail and detention centers. The purpose of the MOU is to ensure that annual inspections of buildings located within a local jurisdiction for which our office is obligated to perform by statute, regulation or contract are conducted by a qualified and competent staff member of an organized fire department. Our office currently holds 50 MOU's with local jurisdictions across the state.



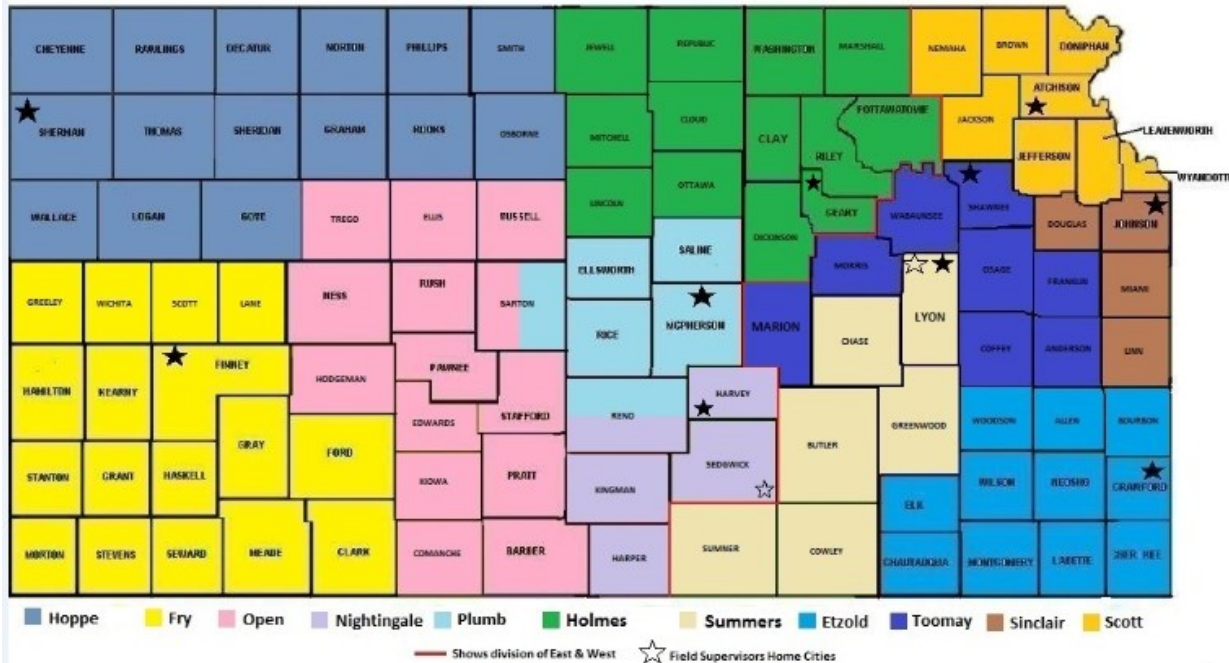


## Prevention Highlights

# PREVENTION NEWS

By: Mende Barnett, OSFM Education Consultant

Our inspectors cover a lot of territory. Below is a map of the counties are inspectors are assigned to. They can overlap in areas as needed.



Answers from page 6. A– Propane cylinder not in cabinet B– Pull station to high C–Electrical cord under carpet D–Sprinkler head obstruction

## 2012 Code Adoption

As the summer months have come upon us we have surpassed our anticipated deadline for the new code adoptions. We will be announcing a public comment period and anticipate that codes will be adopted in September. We apologize for the delay and appreciate your patience.

## July 2015 Joint Provider Training

Each year our office partners with LeadingAge, KACE and KCAL to put on what is called, "Joint Provider Training". This year we had a two day conference (same sessions but one day is held in Wichita and the next in Topeka) that consists of providing these healthcare associations with up- to- date fire prevention and code compliance information as well as other topics related to the inspection process.

This year we had Skip Johnson from Simplex Grinnell who spoke on sprinkler systems, Fire Marshal Reason Bradford from Emporia Fire Department who talked about a fire at an Emporia Assisted Living Center, Ray Bizal with NFPA who discussed what NFPA is and how they contribute to the healthcare industry and Mende Barnett, Education Consultant with the Office of the State Fire Marshal who discussed several topics including violations, Categorical Waivers and information regarding E-cigarettes.

## Color Run Fire Safety

There was a massive fire/dust explosion in Taiwan at a Color Party. The "dust" was actually colored corn starch which is the same thing used in Color Runs here in the U.S. and is believed to be the source of the fire/explosion. Color Vibe 5k runs are especially popular in Kansas and use the same powder. Factors surrounding the explosion point towards the concentration of the corn starch dust as participants were standing in an empty pool. The pool held in clouds of dust and some sort of ignition source was able to ignite the clouds, injuring nearly 500 people. Counts vary between 100 and 190 being in intensive care and other who later died. It is still unclear what sparked the blaze. Both cigarettes and the lighting are being investigated as a possible heat source.

While 5k's are normally in the open many entities will be researching the use of colored corn starch and its safety. Taiwan has since banned the use of colored corn starch powder pending investigations. Packaged powders warn that the materials are flammable and should not be used in high concentrations or in high heat as it could cause a dust explosion.

**Thank you for helping  
us keep our state  
fire safe!**



**KANSAS**

